



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,385	12/04/2003	Ivan Lalovic	H1541	7547
45305	7590	07/14/2005		
RENNER, OTTO, BOISSELLE & SKLAR, LLP (AMDS) 1621 EUCLID AVE - 19TH FLOOR CLEVELAND, OH 44115-2191			EXAMINER KIM, PETER B	
			ART UNIT 2851	PAPER NUMBER

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/727,385

Applicant(s)

LALOVIC ET AL.

Examiner

Peter B. Kim

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-20 is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 4-11 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's arguments filed on June 14, 2005 have been fully considered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1, 2, and 4-11 are rejected under 35 U.S.C. 102(a) as being anticipated by Shiraishi (2003/0043356).

Shiraishi discloses a device for determining projection lens pupil transmission distribution in a photolithographic imaging system comprising an illumination device (1, 2), a transmissive reticle (27), an aperture layer (16) having a plurality of opening therethrough (Fig. 12), a diffuser (35a,, 35b, para 0194) on the illumination source side (Fig. 12), a projection lens system (29) and an image plane wherein a pupil image corresponding to each of the plurality of opening in the aperture layer is formed at the image plane when radiation passes through the reticle, the diffuser, the aperture layer and the projection lens system, the pupil image having a projection lens pupil transmission distribution (although not expressly mentioned, it is inherent that a pupil image will be formed at an image plane).

Allowable Subject Matter

Claims 12-20 are allowed.

Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 3, none of the prior art of record teaches the diffuser configured to be oscillated during operation of the device in combination with the structures in claim 1.

Regarding claim 12, none of the prior art of record teaches a method for determining projection lens pupil transmission distribution and illumination source aperture uniformity comprising the step of measuring the first pupil intensity distribution without a diffuser and measuring the second pupil intensity distribution with a diffuser mounted and comparing the two in combination with the other steps of the method.

Regarding claim 17, none of the prior art of record teaches a device for determining both illumination source aperture uniformity and projection lens pupil transmission distribution in a photolithographic imaging system comprising first pupil image is measured without a diffuser and the second pupil image is measured with a diffuser and the relations recited in the claim are satisfied.

Response to Arguments

In response to applicant's arguments Chuang reference is withdrawn.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter B. Kim whose telephone number is (571) 272-2120. The examiner can normally be reached on 8:00 AM - 5:30 PM.

Art Unit: 2851

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Peter B. Kim
Primary Examiner
Art Unit 2851

July 6, 2005